

**REMARKS ON THE OCCURRENCE OF BUPRESTID
LARVAE IN SAWN LUMBER**

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A good many articles have been written presenting evidence of long larval life and delayed emergence of Buprestidae, usually *Buprestis aurulenta*. While I do not pretend to offer evidence which would discredit these claims, I do think that not enough has been published presenting the opposite views; that is, observations which tend to prove that Buprestidae do oviposit and breed, generation after generation, in long dead wood, and often in prepared timbers.

It is often assumed, when adult beetles emerge from timbers or walls of buildings, that the larvae must have been in the log when the latter was cut up. Various reasons are given as an excuse for this assumption, the commonest being that the young larvae must have sapwood to feed on at first. *Buprestis aurulenta*, the species which figures most often in these accounts, actually seems seldom to oviposit in any wood unless it is dead and thoroughly dried. Multitudes of other beetles, including, to give only one example, the species of the great genus *Anoplodera* of the Cerambycidae, breed habitually in wood that has been so long dead that often the sap wood has entirely rotted away. Another argument for supposing that the wood did not become infested after being used in construction is based on the idea that the beetles will not oviposit except in bright sunshine. Beer (Col. Bull., vol. 3, pp. 81-84, 1949) sets forth some evidence to show that this objection is not too well founded. Besides, it must be only in very rare cases that it can be shown that the sun could never shine on any part of a timber, or on any adjacent timber from which the larva could have transferred itself.

Buprestidae have been many times observed ovipositing, or attempting to oviposit, in cracks in old dried timber and sawn boards. Spencer (Proc. Ent. Soc. British Columbia, vol. 27, p. 6, 1930), while citing some of these instances, makes much

of the possibility that the beetles might have been merely going through the motions. While this may, at the time, have been commendable scientific caution, with so much accumulated evidence, often involving many beetles at one time, further doubt can hardly be justified. One example of my own observations I will add at this time: I once noted a female *Buprestis aurulenta* attempting to find a place for ovipositing in the door casing of a newly erected house. The insect was apparently not in the least deterred by the fact that the woodwork had recently been painted a brilliant red.

It is surprising to me that in every article I have read on the subject the most obvious piece of evidence has been completely overlooked. Wood boring larvae never, until ready to emerge as adult insects, break through the outer layers of the wood they inhabit. They are evidently able, in some way, to detect the proximity of the outer air in time, and never make the mistake of breaking through. Now it is clear that if an infested log be cut up into structural timbers, many burrows will be exposed by the saw cut. It is possible, but not likely, that a lightly infested log might be cut into heavy timbers without exposing many borings. To cut a log into boards hardly more than half an inch in thickness, without bringing to light a single boring, would seem nearly certain proof that the log was not infested. Yet I have seen dozens of such boards, liberally sprinkled with the exit holes left by adult beetles, not one of which showed the least sign of larval workings on the surface of the wood.

There is some reason for believing that Buprestidae often oviposit in the same wood from which they emerge, rather than bother to search for fresh breeding places. The basis for this idea lies in the fact that some buildings seem to be always infested, while others remain free. I have several times heard people remark that "such-and-such house has 'wedding beetles' in the floor." As some beetles emerge nearly every year, those who hold that the larvae were in the wood when the building was erected, must suppose that the length of larval life varies very greatly in different individuals, under identical conditions.

I am able to report first hand on this particular aspect of the discussion, since my own house is infested with two species. For at least the last five or six of the ten years I have lived here, specimens of *Buprestis aurulenta* have turned up in the attic during the spring and summer. The holes from which the beetles emerged are always easily found, in the fir shiplap which serves as a floor. As mentioned above, there is no evidence in any of these boards that they were infested before being manufactured. The house is between fifteen and twenty years old. Some beetles have bored their way out from the end walls of the house through red cedar siding which overlies the fir shiplap sheathing. Another appeared in a ground floor room, having made a neat hole through the papered ceiling.

During the last two seasons I found a few specimens of *Chrysophana placida* also in the attic. Whether these actually bred in the woodwork remained in doubt until recently. Last autumn, having undertaken to paint the house, I was afforded the opportunity of examining the whole exterior. In the area around the south attic window I noticed a great number of small exit holes, evidently the work of *C. placida*. I am not aware of the usual host species of *C. placida*, but I presume that these, like the *Buprestis*, had fed in the fir shiplap and on reaching maturity had drilled straight out through the cedar siding.

I have been able to observe many other instances of prepared lumber of different sizes harboring Buprestid larvae. The spectacle of bridges and wharves riddled with their exit holes is common enough; in fact I think that nearly all such structures are more or less heavily infested. On two occasions I have found larvae in small bits of packing case wood hardly thick enough to afford space for the burrows. One of these cases merits mention in greater detail. The piece of wood in question, about 2x6 $\frac{1}{4}$ inches had been used as a plaything by a child, immersed in seawater a good part of the time. It was later left on a shelf in my kitchen. Months later, noticing some dust dropping from it, I placed it in a can. Next spring, no beetle having shown up, I broke the wood and found it only a

thin shell full of dust. It contained a single partly grown Buprestid larva. I do not think I need to enlarge on the improbability of this larva having been in the log from which, after many travels and no doubt some lapse of time, this scrap of wood eventually reached my kitchen.

While I could add a great deal more to the above observations, I feel that enough has been said to prove my point, that the existence of Buprestid larvae in sawn lumber is a commonplace occurrence. Also that, in cases of beetles emerging from timbers imported to countries to which the species is not native, the possibility of those insects being the second or even the third generation, must be considered before definite conclusions can be drawn.

AFFILIATION WITH THE SSZ

On December 16, 1949, the newly-formed Coleopterists' Society applied for affiliation with the only-slightly-older Society of Systematic Zoology. We are informed that the council of the SSZ accepted the application at its December 28th meeting.

Because of the youth of both these societies it is difficult to foresee what specific advantages may result from this affiliation. The SSZ has over 550 members, scattered through the entire field of systematic zoology, and may well reach its goal of 1000 members. The influence of this society should be considerable, and the specialized societies like ours should find it profitable to keep in touch. We may also be able to aid the SSZ in its programs for improving the practice and teaching of taxonomy and the status of taxonomists.

G. B. V., *Sec'y.*